

3. Remarks

35 U.S.C. §112, first and second paragraph

Claim 18 stands rejected under 35 U.S.C. §112, first and second paragraph. In response, claim 18 has been amended to read: An isolated antibody, comprising an antibody that specifically binds to a polypeptide comprising SEQ ID NO:2," as suggested by the Examiner. Applicants submit that the present claims, as amended, fully satisfy the requirements of enablement and definiteness and ask that the rejections be withdrawn.

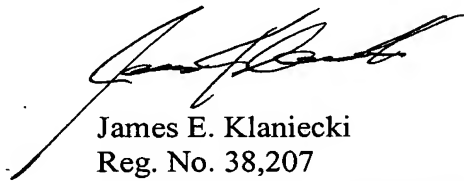
35 U.S.C. §102

Claims 18-20 stand rejected under 35 U.S.C. §102(e1) and (e2) as being anticipated by U.S. Patent Appln. Pub. No. 2002/0198147 and USPN 6,642,360, respectively. The Examiner states that the prior art teaches antibodies that bind to the PRO355 polypeptide (SEQ ID NO:61), which shares 99.1% identity with Applicants' SEQ ID NO:2. The Examiner notes that Applicants' SEQ ID NO:4 shares 97.8% identity with the PRO355 protein sequence. Based on the percent identity between Applicants' protein sequences and the PRO355 sequence, the Examiner believes that the antibodies taught in the prior art (and claimed in U.S. Patent Appln. Pub. No. 2002/0198147) are the same antibodies that Applicants are now claiming. Applicants respectfully disagree.

Applicants submit that USPN 6,642,360 and U.S. Patent Appln. Pub. No. 2002/0198147 are not prior art because Applicants' date of invention antedates the earliest effective filing date of the references. As evidence, Applicants submit the enclosed Declaration under 37 CFR 1.131, which shows that Applicants were in possession of the SEQ ID NO:2 and 4 prior to December 3, 1997, which is prior to the earliest effective filing date for either of the cited references. Consequently, USPN 6,642,360 is not prior art and the rejection under 35 U.S.C. §102(e2) may be properly withdrawn.

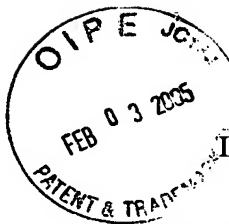
As to the rejection under 35 U.S.C. §102(e1) that U.S. Patent Appln. Pub. No. 2002/0198147 anticipates the present claims, Applicants reiterate that U.S. Patent Appln. Pub. No. 2002/0198147 is not prior art to the present application because Applicants' date of invention is prior to the earliest effective filing date of the reference (*i.e.*, December 3, 1997). Applicants wish to alert the Examiner that they will be initiating Interference proceedings against the cited reference in the near future.

Respectfully submitted,



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Date: January 28, 2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

Attorney Docket No.: 2873-US

Peter Robert Baum and William Christian Fanslow III

Serial No.: 09/778,187

Group Art Unit: 1644

Filed: February 06, 2001

Examiner: Roark, J. H.

For: MOLECULES DESIGNATED LDCAM

DECLARATION UNDER 37 C.F.R. §1.131

Commissioner of Patents
P. O. Box 1450
Alexandria VA, 22313-1450

COPY

Sir:

We, the undersigned, hereby declare that:

1. We are the same Peter Robert Baum and William Christian Fanslow III named as co-inventors on the above-identified application. Prior to December 03, 1997, a nucleic acid encoding human LDCAM was isolated, the sequence of said nucleic acid was determined, and the amino acid sequence encoded by said nucleic acid was deduced, in the United States of America by us, the co-inventors named in the subject application, as evidenced by the Exhibit enclosed herewith.

2. The nucleic acid and amino acid sequence data presented in the Exhibit were obtained and the works that generated those data were completed in this country prior to December 03, 1997. The amino acid sequence presented in the Exhibit (HuB7L1-CoR) is identical to SEQ ID NO: 2 of the instant application, which is the amino acid sequence of human LDCAM.

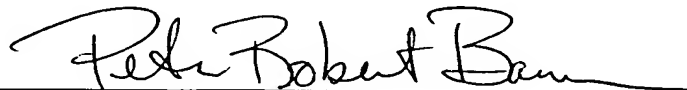
3. We therefore submit that this showing of facts is sufficient in character and weight as to establish that the invention of this application was reduced to practice prior to December 03, 1997, the earliest possible 102(e) date of the cited publication, U.S. Patent Application Publication US 2002/0198147 A1.

4. We further declare that all statements made herein of our own knowledge are true, and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both,

under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

5.22.03

Date



Peter Robert Baum

5-23-03

Date



William Christian Fanslow III

HuB7L1-CoR Full Length

(Linear) (Six Base) MAP of: 4469-Wi26.Seq check: 1995 from: 1 to: 1535
[hollingsworth.cncdna.4469]

req 4469 HuB7L1 counterstructure Wi26 pool314-28#34 FINAL SEQUENCE FILE
3mGel1648, #7046, #5080 / 3mGel1663 dpc7266,67 / 2mGel1671 dpc7305,6
4469-wi26

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aomi
etaE
1131
//
      B
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Sal-22778 ->
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mh
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12
/
GCGGCCGCGCCCGACATGGCGAGTGTAGTGCTGCCGAGCGGATCCCAGTGTGCGGCCGCA
1 -----+-----+-----+-----+-----+-----+-----+ 60
CGCCGGCGCGGGCTGTACCGCTCACATCACGACGGCTCGCCTAGGGTCACACGCCGCCGT
a      M A S V V L P S G S Q C A A A -

      B
s
p
N      B      B
s      BsKNH AsBSX B1
P      aaaaa vrgmm a2
B      nHsre aFlaa n8
2      11112 11111 26
      // / // /
GCGGCCGCGCGGGCGCCTCCCGGGCTCCGGCTCCGGCTTCTGCTGTTGCTCTTCTCCGCC
61 -----+-----+-----+-----+-----+-----+-----+ 120
CGCCGCCGCCCGCGGAGGGCCCGAGGCGGAGGCGGAAGACGACAACGAGAAGAGGCCG
a      A A A A A P P G L R L R L L L L L F S A -

N
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22
A
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1
GCGGCACTGATCCCCACAGGTGATGGGCAGAATCTGTTTACGAAAGACGTGACAGTGATC
121 -----+-----+-----+-----+-----+-----+-----+ 180
CGCCGTGACTAGGGGTGTCCACTACCGTCTTAGACAAATGCTTTCTGCACTGTCCTAG
a      A A L I P T G D G Q N L F T K D V T V I -
Signal seq.
GAGGGAGAGGTTGCGACCATCAGTTGCCAAGTCAATAAGAGTGACGACTCTGTGATTGAC
181 -----+-----+-----+-----+-----+-----+-----+ 240
CTCCCTCTCCAACGCTGGTAGTCAACGGTTCAGTTATTCTCACTGCTGAGACACTAAGTC
a      E G E V A T I S C Q V N K S D D S V I Q -

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1 1 1 1
 CTACTGAATCCCAACAGGCAGACCATTATTTTCAGGGACTTCAGGCCTTTGAAGGACAGC
 241 -----+-----+-----+-----+-----+ 300
 GATGACTTAGGGTTGTCCGTCTGGTAAATAAAGTCCCTGAAGTCCGGAAACTTCCTGTCTG
 a L L N P N R Q T I Y F R D F R P L K D S -

A P B
 l A s s
 w p h m
 N o A B
 l l 1 1

#30518 (7A) →
 AGGTTTCAGTTGCTGAATTTTTCTAGCAGTGAAGTCAAAGTATCATTGACAAACGTCTCA
 301 -----+-----+-----+-----+ 360
 TCCAAAGTCAACGACTTAAAAAGATCGTCACTTGAGTTTCATAGTAACTGTTTCAGAGT
 a R F Q L L N F S S S E L K V S L T N V S -

#30509 (1A/6A) → #30516
 ATTTCTGATGAAGGAAGATACTTTTGCCAGCTCTATACCGATCCCCACAGGAAAGTTAC
 361 -----+-----+-----+-----+ 420
 TAAAGACTACTTCTTCTATGAAAACGGTCGAGATATGGCTAGGGGGTGTCTTTCAATG
 a I S D E G R Y F C Q L Y T D P P Q E S Y -

X B B E
 c s C s c
 m a l a o
 (5A) → 1 A a B R
 1 1 1 1 5
 ACCACCATCACAGTCCTGGTCCCACCACGTAATCTGATGATCGATATCCAGAAAGACACT
 421 -----+-----+-----+-----+ 480
 TGGTGGTAGTGTTCAGGACCAGGGTGGTGCATTAGACTACTAGCTATAGGTCTTTCTGTGA
 a T T I T V L V P P R N L M I D I Q K D T -

H
 B i E B
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#30514 (4A) →
 GCGGTGGAAGGTGAGGAGATTGAAGTCAACTGCACTGCTATGGCCAGCAAGCCAGCCACG
 481 -----+-----+-----+-----+ 540
 CGCCACCTTCCACTCCTCTAACTTCAGTTGACGTGACGATACCGGTGCTTCGGTTCGGTGC
 a A V E G E E I E V N C T A M A S K P A T -

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ACTATCAGGTGGTTCAAAGGGAACACAGAGCTAAAAGGCAAATCGGAGGTGGAAGAGTGG
 541 -----+-----+-----+-----+ 600
 TGATAGTCCACCAAGTTTCCCTTGTGTCTCGATTTCCGTTTAGCCTCCACCTTCTCACC
 ← #30517 (5B/6B/7B)

			B			
	N	N	S	E		
A	s	sP	pH	c	D D	
f	p	pv	lg	o	r r	
l	H	Bu	2i	5	d a	
3	l	22	8A	7	1 2	
			61	1		

a S D M Y T V T S Q L M L K V H K E D D G -

		B			
P		s			
p p		PH			
u s		lg	S	P	B N
M s		2i	f	s	s
l l		8A	c	t	p
/		6l	1	1	B
		'			2

661 GTCCCAGTGATCTGCCAGGTGGAGCACCCCTGCGGTCACTGGAAACCTGCAGACCCAGCGG 720
-----+-----+-----+-----+-----+-----
CAGGGTCACTAGACGGTCCACCTCGTGGGACGCCAGTGACCTTTGGACGTCTGGGTGCGCC
V P V I C Q V E H P A V T G N L Q T Q R -

			B	
			s	
		A	pH	E
X		p	lg	C
b	S	a	2i	O
a	m	L	8A	N
l	l	l	6l	l

721 TATCTAGAAGTACAGTATAAGCCTCAAGTGCACATTCAGATGACTTATCCTCTACAAGGC
-----+-----+-----+-----+-----+-----+-----+ 780
ATAGATCTTCATGTCATATTCGGAGTTCACGTGTAAGTCTACTGAATAGGAGATGTTCCG

← #30515 (4B)
a Y L E V Q Y K P Q V H I Q M T Y P L Q G

B		H	N
AsSX	S	iHA	s
vrmm	m	npf	p
aFaa	l	cal	H
1111	1	213	1
/ /		/	

781 TTAACCCGGAAGGGGACGCGCTTGAGTTAACATGTGAAGCCATCGGGAAGCCCCAGCCT
-----+-----+-----+-----+-----+-----+-----+ 840
AATTGGGCCCTTCCCTGCGGAACTCAATTGTACACTTCGGTAGCCCTTCGGGGTCGGA

a L T R E G D A L E L T C E A I G K P Q P -
GTGATGGTAACTTGGGTGAGAGTCGATGATGAAATGCCTCAACACGCCGTACTGTCTGGG
841 -----+-----+-----+-----+-----+ 900
CACTACCATTGAACCCACTCTCAGCTACTACTTTACGGAGTTGTGCGGCATGACAGACCC
a V M V T W V R V D D E M P Q H A V L S G -

B
S
P
AB1
pa2
an8
126
//
N H
S i
P n
B d
2 3

CCCAACCTGTTTCATCAATAACCTAAACAAAACAGATAATGGTACATACCGCTGTGAAGCT
901 -----+-----+-----+-----+-----+ 960
GGGTGGACAAGTAGTTATTGGATTGTTTGTCTATTACCATGTATGGCGACACTTCCA-
(-ggatatcactcagcataatgtata t7 Promoter)
a P N L F I N N L N K T D N G T Y R C E A -
41-mer 33713

B
S
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c1
c7
11
#30511 (2A/3A) →
TCAAACATAGTGGGAAAGCTCACTCGGATTATATGCTGTATGTATACGATCCCCCACA
961 -----+-----+-----+-----+-----+ 1020
AGTTTGTATCACCCCTTTTCGAGTGAGCCTAATATACGACATACATATGCTAGGGGGGTGT
a S N I V G K A H S D Y M L Y V Y D P P T -

ACTATCCCTCCTCCCACAACAACCACCACCACCACCACCACCACCACCACCACCATCCTT
1021 -----+-----+-----+-----+-----+ 1080
TGATAGGGAGGAGGGTGTGTTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTAGGAA
a T I P P P T T T T T T T T T T T T T T T I L -
← #30512 (2B)

B
S A
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1 1
ACCATCATCACAGATTCCCGAGCAGGTGAAGAAGGCTCGATCAGGGCAGTGATCATGCC
1081 -----+-----+-----+-----+-----+ 1140
TGGTAGTAGTGTCTAAGGGCTCGTCCACTTCTTCCGAGCTAGTCCCGTCACCTAGTACGG
←
← #30513 (3B)
start T.M.

a T I I T D S R A G E E G S I R A V D H A -

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GTGATCGGTGGCGTCGTGGCGGTGGTGGTGTTCGCCATGCTGTGCTTGCTCATCATTCTG
1141 -----+-----+-----+-----+-----+ 1200
CACTAGCCACCGCAGCACCGCCACCACCACAAGCGGTACGACACGAACGAGTAGTAAGAC
a V I G G V V A V V V F A M L C L L I I L -

H
a
e
2
B
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H
1

GGGCGCTATTTTGCCAGACATAAAGGTACATACTTCACTCATGAAGCCAAAGGAGCCGAT
1201 -----+-----+-----+-----+-----+ 1260
CCCGCGATAAAACGGTCTGTATTTCCATGTATGAAGTGAGTACTTCGGTTTCCTCGGCTA
a G R Y F A R H K G T Y F T H E A K G A D -

GACGCAGCAGACGCAGACACAGCTATAATCAATGCAGAAGGAGGACAGAACAACCTCCGAA
1261 -----+-----+-----+-----+-----+ 1320
CTGCGTCGTCTGCGTCTGTGTCGATATTAGTTACGTCTTCCTCCTGTCTTGTGAGGCTT
← #30510 (1B)

a D A A D A D T A I I N A E G G Q N N S E -

S X
c b
a a
1 1

GAAAAGAAAGAGTACTTCATCTAGATCAGCCTTTTTGTTTCAATGAGGTGTCCAACTGGC
1321 -----+-----+-----+-----+-----+ 1380
CTTTTCTTTCTCATGAAGTAGATCTAGTCGGAAAAACAAAGTTACTCCACAGGTTGACCG
a E K K E Y F I *

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CCTATTTAGATGATAAAGAGACAGTGATATTGGAACCTTGCGAGAAATTCGTGTGTTTTTT
1381 -----+-----+-----+-----+-----+ 1440
GGATAAATCTACTATTTCTCTGTCACTATAACCTTGAACGCTCTTTAAGCACACAAAAAA

TATGAATGGGTGGAAAGGTGTGAGACTGGGAAGGCTTGGGATTTGCTGTGTAAAAA
1441 -----+-----+-----+-----+-----+ 1500
ATACTTACCCACCTTTCCACACTCTGACCCCTCCGAACCTAAACGACACATTTTTTTTT

B
ENXs
aomi
etaE

1131

//

AAAAAAATGTTCTTTGGAAAGAAAAAGCGGCCGC
 1501 -----+-----+-----+----- 1535
 TTTTTTTACAAGAAACCTTTCTTTTTTCGCCGCCG

Enzymes that do cut:

Acc1	Afl3	AlwN1	Apo1	Apa1	ApaL1	Ava1	Bal1
BamH1	Ban1	Ban2	Bcg1	Bgl1	BsaA1	BsaB1	BsaH1
Bsg1	BsiE1	BsmB1	Bsp1286	BspH1	BspM1	BsrF1	BstZ171
Cla1	Dra2	Drd1	Dsa1	Eae1	Ear1	Eco571	EcoN1
EcoR5	Hae2	HgiA1	Hinc2	Hind3	Hpa1	Kas1	Nar1
Not1	NspB2	NspH1	PpuM1	PshA1	Pss1	Pst1	Pvu2
Sap1	Sca1	Sfc1	Sma1	Sml1	Sst2	Stu1	Tth32
Xba1	Xcm1	Xho2	Xma1	Xma3			

Enzymes that do not cut:

Aat2	Acl1	Afl2	Age1	Asc1	Ase1	Asp718	Asu2
Avr2	Bbs1	BciV1	Bcl1	Bgl2	Bpu11021	Bpm1	Bsa1
BsiW1	Bsm1	BspE1	BssH2	BstE2	BstX1	Bsu361	Dra1
Dra3	Eam1105	Eco473	EcoR1	Fse1	Fsp1	Kpn1	Mlu1
Mun1	Nco1	Nde1	NgoM1	Nhe1	Nru1	Nsi1	Pac1
PflM1	Pme1	Pml1	Pvu1	Rsr2	Sall	Sfi1	SgrA1
SnaB1	Spe1	Sph1	Srf1	Sse8387	Ssp1	Sst1	Sty1
Swa1	Tth31	Xho1	Xmn1				

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